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ABSTRACT

This environmental teaching guide is designed to help Illinois teachers promote wise land-use planning at the secondary level. Program objectives, background information, activities and games for use in and outside of the classroom, a simulated problem-solving exercise, resource lists, and a test with answers are included. (JW)

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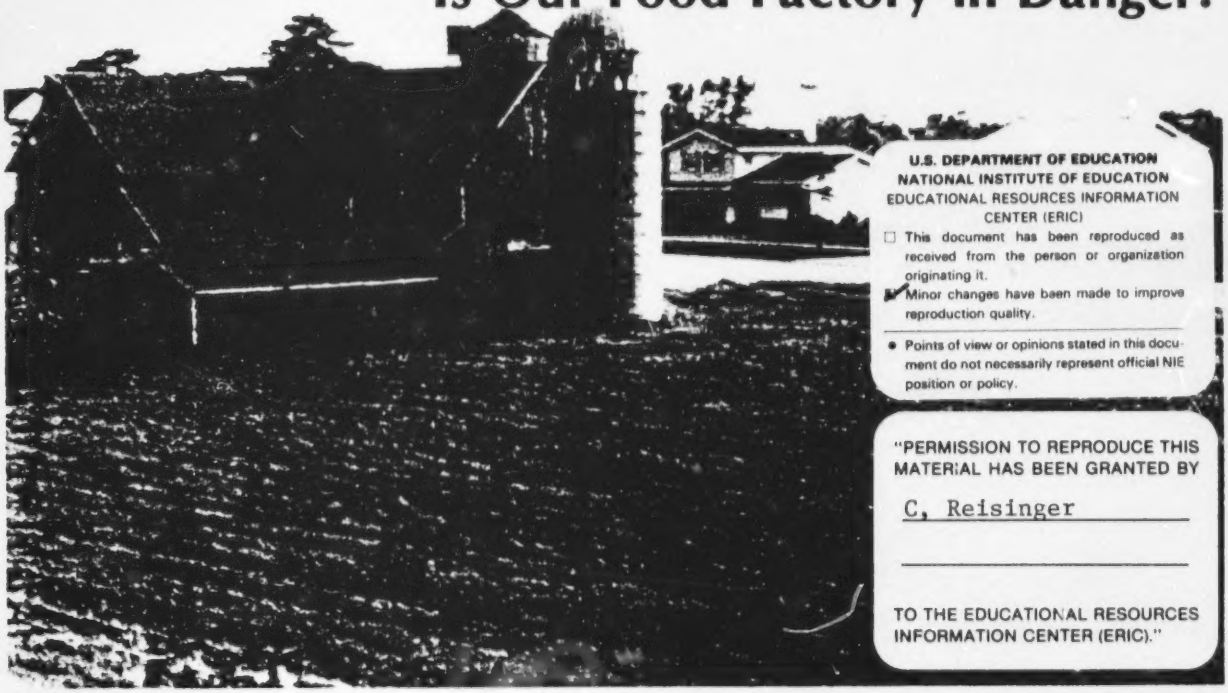
Agricultural Land:

Is Our Food Factory in Danger?



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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Fastbacks are booklets designed to help teachers promote the study of the environment by Illinois students. Research projects are stressed. This fastback suggests classroom work and fieldwork for students to study facts about the loss of Illinois farmland to other uses and to learn that wise land use planning is essential to future food production and the economy of the State.

Why should we be concerned when productive agricultural land is built upon, flooded for reservoirs, or covered with asphalt and concrete for parking lots, highways, and airports? Because the process of land conversion is usually irreversible. Land is almost never farmed again as it was before being covered with housing, shopping centers, or industry. Good farmland is a finite resource. We all depend on it for our food supply.

Illinois ranks third in the country in the amount of prime farmland. Over two-thirds of our rural land is called prime — the very best. Prime farmland has the soil quality and climate necessary to economically produce high yields of crops with the lowest input of energy, when treated and managed properly. It can be farmed indefinitely with good management. Between 1967 and 1977, however, an average 106,000 acres of Illinois agricultural land was converted to other uses each year. (See National Agricultural Lands Study, 1981) That equals over one million acres lost to farming in only ten years! And, if this trend continues at the same rate, by the year 2000 we will have lost enough farmland to irreversible uses to equal the size of five or six average Illinois counties. An average county covers 550 square miles, or approximately 353,000 acres.

Agriculture is a big business in our State! We consistently rank at the top in the Nation for corn and soybean production and agricultural exports. About 40% of the Illinois labor force is directly related to agriculture.

As the best land is converted to other uses, it will cost farmers more to bring marginal land into production and keep it at high levels of productivity. Wise use of this natural resource — the soil — is essential to all of us. It is the source of our food.

Objectives

Students participating in this study will:

1. Understand that all food originates in the soil and realize that soil is necessary for all life.
2. Understand the economic, ecological, and social implications of losing land through development and soil erosion.
3. Become aware of legislative and technical tools and strategies being used or developed to protect Illinois agricultural land.
4. Realize that this issue concerns them personally and develop an informed opinion about farmland loss.

Planning and distributing this fastback is a cooperative venture between the United States Department of Agriculture, Soil Conservation Service and the Illinois Board of Education.

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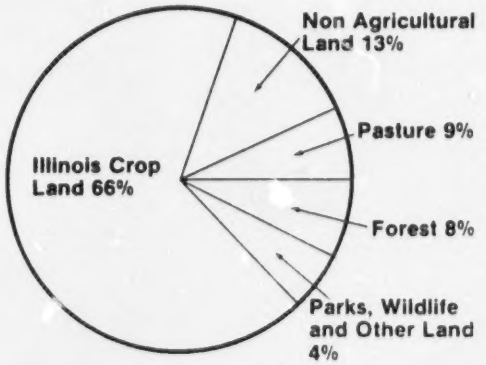
Background

Production Increases

Since World War II, technology has increased crop yields through the development of better fertilizers, improved insect and weed control, and more productive plant varieties. Through technological advances and improved management techniques, farmers are producing more on less land. Better machinery has reduced time spent in the fields. Today's farmers can produce 76% more crops on the same number of acres than could the preceding generation. In the 1860's one farm worker grew enough food for 5 people; in the 1960's, 28 people; and today, 78 people are fed by only one farm worker. About 2% of the total U.S. population produces all the food and fiber supply in our country.

Surplus Spurs Exports

High productivity has resulted in food surplus, which in turn has led to an increase in exporting. About $3 billion in U.S. agricultural products were exported in 1953. By 1981, that figure had jumped to nearly $44 billion. Dependency on agricultural exports to reduce nonagricultural trade deficits and provide stability to the U.S. trade balance has grown. In 1980, 40% of America's cropland harvest was sent overseas. That year, farm exports contributed a net of $23.2 billion to our balance of trade. Illinois leads the Nation in the amount of farm commodities exported. Export sales totalled nearly $3.6 billion in 1980, from a state production total of nearly $8 billion in crops, livestock, and livestock products.



100% Illinois = approximately 36 million acres
87% Rural Land = 31.4 million acres
Crop Land = 23.8 million acres
Pasture Land = 3.1 million acres
Wood Land = 3.0 million acres
Parks, Wildlife Land, Windbreaks, Green Belts = 1.5 million acres

* From 1977 National Erosion Inventory, USDA Soil Conservation Service

Increased Production Stresses Land

Increased exports during the early 1970's caused more land to be put into production and more surplus. Some of this land was marginal for row crops, and using it has greatly increased erosion. Each year 187 million tons of soil movement takes place on Illinois farmland as a result of wind and water erosion. Intense farming practices degrade and deplete the soil and water resources. This causes productivity levels to slow down dramatically. The rate of increase in crop yields per acre also seems to be declining. For example, national crop yields increased at an annual rate of 1.6% in the 1960's, but during the 1970's yields increased at an annual rate of .76%.

Lost Land Hurts Agriculture

Other demands have been put on the land. The land best suited to farming is also best suited to other uses because it is level, well drained, and not subject to flooding.

The final report of the Task Force on the Future of Illinois which is affiliated with the Illinois State Chamber of Commerce, concludes, "By 2000, Illinois farmland will reach capacity for absorbing more crop acreage and increased yields will no longer be able to compensate for farmland losses."

World Population Grows

World population reached 4 billion in 1975. The world also produced an all-time record harvest of about 3.3 billion metric tons of all kinds of food that year. By 1982 world population had grown to 4 billion, 551 million. Populations grow exponentially, that is, they double and quadruple. In 50 to 60 years the world population is expected to reach 8 billion. Our harvests are not increasing at the same rate, however. The world is supporting more and more people each year. The United States is helping provide for a growing demand for agricultural products. Secretary of Agriculture John Block predicts there will be a 60 to 85% increase in demand for U.S. agricultural products in the next 20 years. Will we be able to keep up?

Agricultural Industry and the Economy

The agricultural industry exceeds $1 trillion in assets. This is equal to about 88% of the capital assets of all manufacturing corporations in the U.S. One out of every 5 workers in the United States is connected with this industry — farming, transporting, manufacturing, or marketing. In Illinois, nearly 2/5's of all jobs are related to agriculture. With the pressures of intense farming contributing to soil loss through erosion and population growth contributing to the loss of farmland to other uses, Illinois' economy can be adversely affected.

Jim Frank, superintendent of the Division of Natural Resources (DNR), Illinois Department of Agriculture (IDOA), comments on the economic problems involved in conversion of farmland:

"In 1979, the average size of an Illinois farm was 268 acres. At a 100,000-acre loss per year, that would be 373 farms . . . In 1978, average cash receipts per farm were $56,176. At the continuing rate of farmland conversion, this would mean a loss of $21 million in farm income. In 1979, there was one farm worker per 139 acres. This 100,000 acres would mean 719 farm workers looking for jobs elsewhere . . ." (See Proceedings of Governor's Conference on the Preservation of Agricultural Land, 1980).

This loss also damages the composite agricultural support system of farm supply businesses and food processing industries.

State Policy Developed

The State is working hard to conserve and protect its agricultural land. One of the earliest strategies that helped farmers keep their land in agricultural production was the use of tax relief. Beginning in 1971, land could be assessed on its use value rather than its market value. Later, a State policy advocating farmland protection evolved from the Rural Revitalization Planning Program that was begun late in 1978. The objective of this program was to develop a strategy to guide activities of state agencies to avoid duplication or conflicts in rural revitalization efforts.

An act which provides for establishing local Agricultural Conservation and Protection Areas was passed by the General Assembly, November 1979, to set state and local policy in statutes to protect agricultural land. Executive Order Number 4, 1980, requires state agencies to assess and modify the agricultural impact that their regulations, procedures, and programs will have on farmland. This order is the cornerstone of state policy because projects resulting in the conversion of prime farmland and supported by any state and/or federal money are in jeopardy of losing funds. Federal farmland protection policy was based on this Illinois legislation. By mid-1982, Executive Order Number 4 was voted into law by the Illinois legislature.

Since September 1981, the Right to Farm Act has protected farmers by limiting the conditions under which farming operations may be involved in nuisance suits.

Changes in Lifestyle

Soil is necessary for food production. Food is, and has been, relatively low priced and bountiful in America. Abundance has allowed us to become used to a variety of plentiful, inexpensive foods. A hundred years ago, Americans spent about 40% of their income on food. Now, we spend less than 17%. No other country can boast of this.

What about the future? We seem to be pushing limits of technology and land. Will we experience high grocery prices and food shortages? Will we change our eating habits or our diets? We have in the past. We consume less eggs and animal fat now because of the concern about high cholesterol. An agricultural economist at Iowa State University calculated that if Americans ate 25% less meat, grain exports could double by 1985 without increasing production. Or is there another way out of this impending crisis?

Conservation

Conservation is defined as the wise use and management of our resources to insure the greatest good for the greatest number for the longest time. All living things and our natural resources are interrelated and interdependent. Our civilization depends on the wise use of this natural resource — soil. Reduce this resource, whether by conversion or by water and wind erosion, and we won't have the abundance we know today.

Conservation and protection of farmland *now* could avert a food shortage in the future. Conscientious land use planning to encourage compact urban areas and orderly urbanization of less productive land will reduce pressure for conversion of farmland.

Sequence of National and State Events Leading To Farmland Protection Policies

National Events

1975 Secretary of U.S. Department of Agriculture (USDA), Earl Butz, listed effects of Federal policies on farmland in "Perspectives on Prime Lands."

1976 U.S. Council on Environmental Quality (CEQ) asked Federal agencies to evaluate the impact of their programs on farmland.

1978 U.S. Environmental Protection Agency (USEPA), USDA, and the U.S. Department of Transportation (DOT), made agency evaluations and admitted that their programs had impact on farmland. They promised to try to alleviate the pressures on farmland caused by their agencies.

1979 USDA and CEQ initiated the National Agricultural Lands Study (NALS) to measure the U.S. farmland resource.

1981 NALS confirmed that the preservation of U.S. farmland should be an issue in the 80's.

U.S. Congress passed the Farmland Protection Policy Act, subtitle I, of the Agriculture and Food Act of 1981, which recognizes the value and limitations of U.S. Farmland as a natural resource, appoints USDA as responsible agency for implementing U.S. policy on farmland, and seeks to minimize Federal agency contributions to U.S. farmland conversion.

State Events

1971 Illinois Soil and Water Conservation Districts (SWCD's) were given authority to review and comment on proposed land use changes on vacant and agricultural lands within the district.

Use value (as opposed to market value) assessments for tax purposes were authorized by legislature for counties having a population over 200,000. Landowners had to apply for the assessment. A tax rollback penalty was imposed when eligible farmland changed use.

1973 Assessment program extended to all counties. Owner still had to apply.

1977 Use value assessment on all Illinois farmland for tax equity.

1978 Illinois Rural Revitalization Planning Program (R^3P^2) was organized. It initiated State policy advocating farmland protection.

Illinois Department of Agriculture (IDOA) and Illinois Institute of Natural Resources (INR) began constructing a state strategy for farmland preservation.

1979 IDOA reorganized to create the Division of Natural Resources (DNR) with the responsibility for soil and water conservation.

General Assembly passed the Agricultural Areas Conservation and Protection Act which authorizes farmers to voluntarily form an agricultural area (minimum of 500 acres) that, when approved by the county board, stands for 10 years (renewable every 8 years) and may not be assessed for any special local taxes nor be subject to any nuisance laws.

Illinois-USDA Farmers Home Administration (FmHA) initiated policy to make no loans or grants that would result in loss of prime farmland.

1980 Responsibility for farmland policy transferred from R^3P^2 to DNR of IDOA.

First statewide Illinois conference on farmland preservation.

Governor Thompson issued Executive Order No. 4 which set IDOA as the agency responsible for farmland preservation. It required 9 state agencies involved in development to complete policy statements by 1982 and formed these agencies into a committee to administer farmland preservation policy.

General Assembly established the Illinois Land Resources Management Study Commission to study land use planning methods.

1981 Farmland Preservation Advisory Committee was established to represent the private sector on preservation of farmland. This committee is composed of private interest groups, municipal officials, farm organizations, etc.

Illinois General Assembly passed the Right to Farm Act to protect farming operations from nuisance suits under certain conditions.

1982 Illinois General Assembly enacted Executive Order No. 4 into State law.

What Happens When the Town Moves in on the Farm?

"The leading cause of farmland loss is unplanned suburban development, sometimes called 'leap frog' or 'scattershot' development because it often skips over land close to town and sprawls out over the countryside in a random pattern. Such development not only takes farmland directly out of production, but also tends to create conditions that make it unpleasant for farmers and homeowners alike." (See Disappearing Farmlands: A Citizen's Guide to Agricultural Land Preservation, 1979)

Potential problems for suburbanites who move to poorly planned housing developments on lands which had been in agriculture:

1. Higher taxes required to provide utilities and community services.
2. Decreased land available to receive rainfall increases the hazard of flooding caused by runoff.
3. Loss of agricultural business — suppliers of machinery, seed, and chemicals — due to decreased demand, means loss of jobs and income in community.
4. Loss of aesthetic "open space".
5. Loss of locally grown produce.
6. Higher food prices.
7. Farm odors, noise from farm machinery, presence of agricultural chemicals, and blowing dust, soil, and agricultural chemicals are potential nuisances.

Potential problems for farmers: (See Impacts of Rural Residential Development on Adjacent Farming Operations in DeKalb, Illinois, 1980.)

1. Decrease in yields and increase in production costs.
2. Complaints of dust, sprays, and smells from homeowners, and threats of possible legal action.
3. Curtailed hours in machine operation.
4. Difficult access to fields separated by roads, subdivisions, etc
5. Vandalized property, trash and litter dumped on fields, yield losses from trampled crops.
6. Increased insurance liability for trespassers' injuries, vandalism, and theft of property or crops.
7. Changes in water drainage patterns and increased runoff water from the more impervious surfaces, caused by houses, roads, new shopping centers, etc.
8. Farm labor becomes scarce and more expensive because of competition with higher paying city jobs.
9. Increased distance to travel for supplies, as agri-business is forced elsewhere by decreased demand in area.
10. Suburban pets can harass and harm livestock.
11. Reluctance to expand livestock operations because of proximity to subdivision

Other current pressures on farm operations, not necessarily related to subdivision building on agricultural lands:

1. Rising energy costs due to shortages.
2. Land taxed at market value instead of agricultural value.
3. Limited technology for producing higher yields.
4. High interest rates on loans.

How Does This Issue Affect You? — Making A Simulated Land Use Decision In Your Community

Number of Participants: 15-35
Time: At least 1½ hours

Objectives

Students will participate in problem solving. They will learn how to obtain appropriate data, explore possible solutions to problems, and attempt to make an educated choice. Students will consider economic, ecological, and social factors in the process of land use decisionmaking. They will consider these decisions from differing points of view that developers, businessmen, farmers, and other special interest groups may have regarding land use.

Preparation

Students will need to answer these questions about their community: What is the main economic base of the community? Is vacant land available within developed areas? Are there city and county plans for extending growth outside the area? What is the capacity and range of existing utilities and services, i.e., water, sewer, phone, electricity, schools, transportation, police and fire protection? Are soil surveys available? Do the soil factors, erodibility factors, and productivity levels indicate the land is best for agriculture? Are there specialty crops grown in the area? Are there any agricultural areas approved by the county board in the community? What are the responsibilities of those in your community who serve on the soil and water conservation district board, the County Planning Commission, the Chamber of Commerce, and the farm organization committee?

Assign students these topics for written or oral reports. Share these with the class before attempting the simulation.

Obtain a prime farmland map and a county map, if available, from the USDA Soil Conservation Service field office. Or, for $.50, obtain an 18 x 24 inch map of your county from the Department of Transportation, Room 217, 2300 South Dirksen Parkway, Springfield, Illinois 62764. Larger maps are also available.

Select three or four alternate sites for the simulation. Examples of some of the problems which should arise from proposed sites are: taking agricultural land out of production, encouraging urban sprawl, extending utilities and services, proposed land conversion causing conflicts between landowner rights and community interests, environmental hazards — i.e. pollution, etc.

Choosing Groups

There are several types of groups you may want to use. Various groups include:
The County Soil and Water Conservation District Board represents the farmers' concerns about soil and water conservation.
The community Chamber of Commerce represents urban business interests.
The farm organization committee represents farmers' and rural agri-business interests.
The County Planning Commission represents short- and long-term interests for the county and community.
The Contractors' Union represents developers' interests.
Wildlife interest group.
Citizen's Committee on Economic Incentives, etc.

Procedure

Explain that each person in the class will be joining one of the special interest groups whose main purpose will be to convince the Town Board, through a verbal presentation, that *their* proposal for development of one of the alternative sites is the most beneficial for the community and its population.

Divide the class into five or more groups. Have each group "elect" one person to serve as a Town Board member. After assigning each group its special interest or agency, explain that the group is to choose one of the alternative sites and develop its own plan of attack. Stress that they need to use their imagination and that the group which considers the most factors will probably be the most convincing. Give them twenty minutes or more to plan all details.

Assign the "newly elected" board members a special interest area such as economic advantages and disadvantages, concern for the environment, sociological concerns, etc. Remind them that they should be able to justify the final site decision to the Farmland Preservation Advisory Committee at the state level.

When planning is finished, convene and give each group five minutes to give its presentation to the Board. Make sure that each group gives the presentation as a group to insure total participation. After each presentation, allow the board members to ask one or two questions, then go on to the next group. When the presentations are complete, you may want to have a 1-or 2-minute rebuttal. The Town Board should be given five to ten minutes to make a decision and their presentation should justify their decision to the entire group (who can now represent the Farmland Preservation Advisory Committee).

The Situation

Give each group a copy of the **situation** and the **task**.

A company wants to build a new plant in _____ _____ (name of town). They claim they will provide about 300-400 new jobs. About 160 acres are required by the company. They also need rail as well as other transportation for their products.

Prior to expanding, the company plans to farm an area of the land not under development. The potential expansion will involve a new process utilizing heavy chemicals. This company has had trouble at other locations because of its lack of concern for pollution control.

The president (and largest shareholder) of the company chose your community because he wants to retire in several years and live close to his grandson, who already lives in _____ (name of town).

Four sites are available. Which does your group think is best? Is there an alternative site?

Task

Your special interest group is to convince the Town Board that your chosen site is the best and most feasible. When preparing your presentation to the board, consider the following aspects:

1. Farmland conversion
2. Cost
3. Public opinion
4. Income
5. Labor
6. Services
7. Recreation
8. Environmental impact
9. Other areas of concern

Follow-Up

Simulate the process to create an agricultural area in your county. Related land use simulations, "moral dilemma stories," and role-playing situations may be found in environmental values clarification books.

Activities In and Out of the Classroom

1. Take a tour in your area to see examples of:
   a. prime farmland and other farmland
   b. areas zoned for development
   c. examples of rural residential and "leapfrog" development
2. Measure the amount of land covered by the interchange on a large highway.
3. Arrange to attend a county or community planning commission meeting.
4. Invite an SWCD director to come to your class and discuss the responsibilities of the SWCD Board, the plans and projects the Board is working on, and county policy on issues such as farmland conversion.
5. Contact the USDA Soil Conservation Service district conservationist in your county. Ask for information about soil surveys — how they are made and how they can be used. Also ask for information about prime farmland in the county.
6. Plot changes in ownership and land use over the year or a period of years on a community map.
7. Follow the State government activities involved with preserving farmland. Contact the Illinois Department of Agriculture, Division of Natural Resources, State legislators, and local representatives. Ask for information concerning State policies on farmland.
8. Take a field trip to the community water supply and purification plant and the sewage disposal plant. Diagram how much land is used, how much is prime, which soils are present, and how it is zoned. Be sure to find out when the plant was built and what the long-range plans are.
9. Visit food processing plants. Develop a flow chart and/or map of production from field to grocery. Ask for information about the costs of raw materials, processing, packaging, transporting, and marketing.
10. Visit several local food markets. Choose a supermarket, cooperative market, and fresh vegetable stand. Find out how far variety foods have to be transported. Chart costs, mileage, and type of transportation.
11. Prepare a display illustrating current and/or ideal long-range planning for your community.
12. Hold a poster or button design contest, developing artwork and slogans to create awareness of this land use issue. Solicit the support of local grocery stores and other businesses. The winning poster entry could be printed on grocery bags.

Resources

People

Soil and Water Conservation Districts (SWCD's) are organized in every county in Illinois. Each is governed by a board of five directors, who have a great deal of expertise in helping individual farmers solve various erosion and sedimentation problems. They also have responsibility for implementing the State Erosion and Sediment Control Guidelines. The SWCD's have legal authority to review and comment on any proposed land use changes on vacant and agricultural lands within the district. A set of criteria has been devised by a committee of the Association of Illinois SWCD's to help the district directors make decisions regarding land use changes.

The USDA's Soil Conservation Service (SCS) was established on April 27, 1935, to provide technical expertise in agronomy, biology, engineering, and forestry to assist landowners in controlling erosion and sedimentation. SCS has assisted in the development of many conservation plans for individual farmers and groups.

This agency is responsible for carrying out the provisions of the 1981 Farmland Protection Policy Act. SCS structure is national, state, regional (areas) and local in scope. SWCD directors work with the SCS personnel and have relied upon that agency's technical expertise when working with farmers and others within the county.

The Cooperative Extension Service (CES) has offices serving every county in the State. The primary thrust of the Extension Service is education. CES is a cooperative effort between Federal, State, and local governments.

The Illinois Department of Agriculture, Division of Natural Resources, (IDOA, DNR) is a State government agency concerned with soil erosion, water quality, land reclamation, and farmland preservation.

Reading Materials

Freilich, Robert H. and Linda Kirts Davis. 1979. "Saving the Land: The Utilization of Modern Techniques of Growth Management to Preserve Rural and Agricultural America." U.S. Government Printing Office, Washington, D.C.

Illinois Department of Agriculture, Division of Natural Resources. 1980. "State Erosion and Sediment Control Guidelines." State of Illinois, Springfield.

Illinois Farm Bureau. 1979. "Soil Conservation Land Preservation." Illinois Agricultural Association, Bloomington, Illinois.

Illinois Institute of Natural Resources, (now Department of Energy and Natural Resources), Environmental Management Division. 1980. "Proceedings of Governor's Conference on the Preservation of Agricultural Lands." State of Illinois, Springfield. Document No. 80/26.

Krohe, James, Jr. 1981. "Breadbasket or Dust Bowl? the Future of Illinois Farmland." Illinois Issues, Sangamon State University, Springfield.

National Agricultural Lands Study (NALS). 1980. "Interim Report No. 1." U.S. Government Printing Office, Washington, D.C.

National Association of Counties Research Foundation. 1979. "Disappearing Farmlands: A Citizen's Guide to Agricultural Land Preservation."

Northern Illinois University, Center for Governmental Studies. 1980. "Impacts of Rural Residential Development on Adjacent Farming Operations in DeKalb, Illinois." Northern Illinois University Press, DeKalb, Illinois.

United States Department of Agriculture Yearbook. 1979. *"What's To Eat? And Other Questions Kids Ask About Food."* Stock No. 001-000-04041-3. U.S. Government Printing Office, Washington, D.C.

Movies and Slide Sets

"Corn or Concrete?" 1980. 12 minutes, 16 mm film. (Illinois farmland conversion problems.) Illinois Department of Agriculture, Division of Natural Resources. Agriculture Building, State Fairgrounds, Springfield, Illinois 62706.

"The Price of Abundance." 1982. 29 minutes, 16 mm film. (Explores need for conserving land, water, and human resources and for ecologically sound agriculture.) Shawnee Resource Conservation and Development Area, Rural Route 6, Box 127-A, Marion, IL 62959.

"Land Use: A Moral Dilemma." 1980. 35 minutes, 16 mm film. (Looks at the Nation's agricultural production capabilities and reflects on past land use and resource use attitudes.) Shawnee Resource Conservation and Development Area.

"Our Vanishing Farms." 1981. 149 slides/audio tape. (Summary of the National Agricultural Lands Study.) Illinois Cooperative Extension Service.

"Where Have All the Farmlands Gone?" 1981. 13½ minutes slide/audio tape. (Illinois prime farmland.) USDA, Soil Conservation Service.

NOTE: The last page of this booklet should be reproduced for your students.

Answers to the farm quiz:

1. F — The average farm worker (owner, family help, and hired help) produces enough to feed and clothe 78 people.
2. T — A large tractor can cost as much as $100,000 or the equivalent of twelve cars at $8,300 each. A new tractor is a large investment for the average farmer.
3. T — An acre is 43,560 square feet of ground. A minimum sized football field would be about 48,000 square feet. One acre would hold four city lots measuring 60 feet x 181 feet.
4. F — It takes about 18 months from the time a calf is born until it is fully grown and ready to be butchered for beef.
5. T — The tree will average five to ten bushels of apples per year. At sixty pounds per bushel, the average tree would bear about 450 pounds of fruit. Two pounds of apples are needed to make a pie.
6. F — A single chicken will lay one egg each day for approximately 240 days during the year. If a fertilized egg is placed in an incubator, it should hatch in 21 days.
7. T — More land is used to grow corn than any other crop, and corn provides more food for people and animals than any other crop.
8. T — A cow will produce 72 glasses of milk daily for about 300 days per year.
9. F — In the six months before it reaches a market weight of 220 pounds, a pig may be fed 680 pounds of feed, which includes 580 pounds of corn and 100 pounds of soybean meal, along with vitamin and mineral supplements.
10. T — This amount of wool is more than enough to make a three-piece suit for your father.

Thought for Food

Most of us know what a cheeseburger tastes like, but where does it come from? Imagine a cheeseburger with all the fixings — meat, cheese, bun, onion, relish, and ketchup. The meat comes from beef cattle, which feed on grass and grain crops. Cheese is a milk product usually obtained from dairy cattle, but it could be a soybean product. The bun is made from flour, which is made from wheat. The onion and cucumbers used in making the relish and the tomatoes used for the ketchup are all farm or garden products. Everything starts on the farm. They all depend on the soil. You can see why it's so important to all of us that farmers take good care of their land and use it for agriculture.

Harvest

Grain Elevator

Tractor

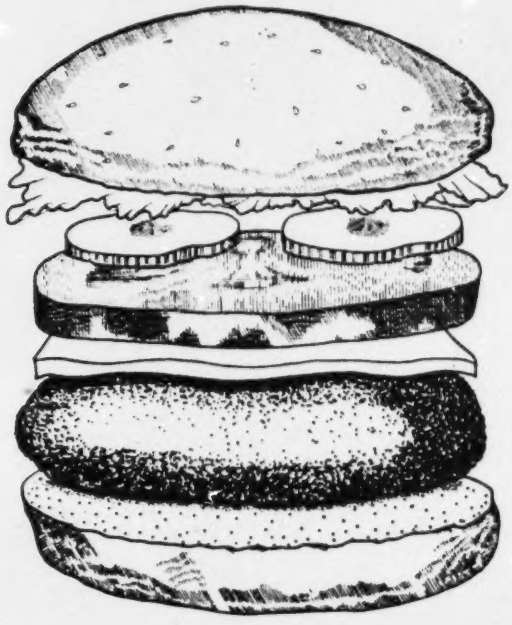
Bushel of Cucumbers

Jar of Pickles

Cucumber Vine

Beef Cattle

Butcher



Bakery

Field of Plants

Lettuce

Tomato Plant

Box of Tomatoes

Cow on Milking Machine

Dairy Person

How Much Do You Know About Farms?

Do you know how much we depend on the business of agriculture in this country? Do you know how many things that we use every day come from the American farm?

Test yourself to see how much you know. The following statements are either true or false. Read each one carefully and then put a "T" or an "F" in the blank.

_____ 1. One American farmer grows enough food each year to feed ten people.

_____ 2. A large tractor used by the American farmer may cost as much as twelve cars.

_____ 3. One acre of land is about the size of a football field.

_____ 4. It takes a newborn calf about five years to become fully grown.

_____ 5. When an average apple tree is fully grown, it will produce enough apples for about 225 pies every year.

_____ 6. A single chicken will lay about 365 eggs a year.

_____ 7. Farmers in the United States grow about half of the world's corn.

_____ 8. One dairy cow may produce 72 glasses of milk daily.

_____ 9. To reach a market weight of 220 pounds, a pig must eat 220 pounds of feed.

_____ 10. On the average, a year old sheep will produce about 8½ pounds of wool.

Now, take this quiz home and let your parents try it.

From: National Future Farmers of America Foundation

Illinois
State Board of
Education

100 North First Street
Springfield, Illinois 62777

Edward Copeland, Chairman
Illinois State Board of Education

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